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HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER

PANTOLIANO JR, RICHARD

ART UNIT	PAPER NUMBER
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2194

NOTIFICATION DATE	DELIVERY MODE
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04/02/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JERRY.SHORMA@HP.COM
mkraft@hp.com
ipa.mail@hp.com

Office Action Summary	Application No. 10/808,223	Applicant(s) KRISHNASWAMY ET AL.	
	Examiner RICHARD PANTOLIANO JR	Art Unit 2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 11-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, and 11-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This Office Action is filed in response to amendments filed on **07 January 2008** in regard to Application# **10/808,223**. **Claims 7-10** were cancelled by the amendment and **Claims 1-6 and 11-26** are currently pending and have been considered below.

Response to Arguments

2. Applicant's arguments with respect to **Claim 1-6 and 11-26** have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. **Claim 16** is objected to because of the following informalities: line 2, "receive" should be "received". Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claim 1-6 and 11-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sandhu et al (US Pat: 6,347,307), hereinafter Sandhu, in view of Knight et al (US PGPub; 2004/0083453), hereinafter Knight.

6. As to **Claim 1**, Sandhu discloses the invention substantially as claimed including the method of data object transformation between a middleware and a application, the method comprising:

a) receiving a message from a messaging middleware by a data transformation adapter, the message including one or more data objects of a first object type, wherein the message is in a first communications format (col. 36, lines 26-40) (The Connect Automated Processor receives the messages from the messaging middleware);

b) converting by the data transformation adapter the message from the first communications format to a second communications format (Col. 48, lines 23-28) (The Connect Automated Processor converts the message to allow it to be sent over an HTTP/IP connection);

c) converting by the transformation adapter the one or more data objects from the first object type to a second object type using mapping rules including eXtensible Markup Language (XML) based syntax that used rule specification guide to facilitate transforming the one or more data objects from the first object type to the second object type (Col. 48, line 62 – Col. 50, line 56) (The Connect Automated Processor converts the Java object to a generic DOM object, then applies XML Stylesheet Transformations (XSLT) to the DOM object to convert it to the FinXML document used by the CFOWeb System); and

d) transmitting by the data transformation adapter the converted one or more second object type data objects to an application (Col. 48, lines 23-28).

7. Sandhu does not explicitly teach wherein the one or more data objects are converted using a first set of one or more transformation classes, the one or more transformation classes being configured to transform the one or more data objects from the first object type to the second object type, each of the one or more transformation classes generated using mapping rules.
8. Knight explicitly teaches generating transformation classes (“transformer object”) based on retrieved XSLT documents containing mapping rules (para. [0012], [0081], [0101] and Fig. 13).
9. It would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Sandhu with the teachings of Knight. One would have been motivated by the modularity offered by allowing for changes to be made in how messages are transformed without having to recompile and rebuild the entire software product being used (Knight: para. [0012]). This allows for the transformation classes to be dynamically generated and utilized as necessary, thereby allowing one to make changes as to how the transformation from one object type to another is performed without requiring the entire application to be taken offline and recompiled.
10. As to **Claim 2**, Sandhu further teaches wherein the first communications format includes a middleware-dependent format, and the second communications format includes a middleware-independent format (col. 36, lines 26-40 and Col. 48, lines 23-28) (The Connect Automated Processor receives the client request message in the form

of XML streams. The Connector processor then transmits the message to the CFOWeb System in the form of an HTTP/IP request).

11. As to **Claim 3**, Sandhu further teaches wherein each of the one or more data objects includes a Java object (Col. 35, lines 40-49).

12. As to **Claim 4**, Sandhu further teaches wherein the first object type includes a domain object model type and the second object type includes an application-specific object model type (Col. 48, line 62 – Col. 50, line 56) (The Connect Automated Processor converts the Java object to a generic DOM object, then applies XML Stylesheet Transformations (XSLT) to the DOM object to convert it to the FinXML document used by the CFOWeb System).

13. As to **Claim 5**, Sandhu further teaches:

a) registering the application with the messaging middleware (col. 36, lines 26-40); and

b) transmitting high-level function calls to the application (col. 37, lines 5-16);

14. As to **Claim 6**, Sandhu further teaches:

a) receiving a second message from the application, the second message including one or more data objects of the second object type (Col. 51, lines 4-9);

b) converting the one or more data objects from the second object type to the first object type, wherein the one or more data objects are converted using a second set of one or more of the transformation classes (Col. 52, lines 13-21);

c) generating a communications line dependent message, the communications line dependent message including the converted one or more first object type data objects (Col. 52, lines 38-46); and

d) transmitting the communications line dependent message to the messaging middleware (Col. 52, lines 38-46).

15. As to **Claim 11**, Sandhu discloses the invention substantially as claimed including a data transformation adapter having program instructions stored in memory, the program instructions comprising:

a) generating a first object model and a second object model, the first object model including a plurality of data objects of a first object type, and the second object model including a plurality of data objects of a second object type (Col. 49, lines 39-55 and Col. 51, lines 31-45) (The FinScripts contain the complete object models of the XML DOM used by the client systems and the FinXML used by the CFOWeb System, as well as the mapping from the first to the second object model);

b) storing the first and second object models in one or more memories (para. [0033], [0039]-[0047]);

c) generating transformation mapping rules, the mapping rules including eXtensible Markup Language (XML) based syntax that uses rule specification guides to

facilitate transforming the one or more data objects from the first object type to the second object type (Col. 49, lines 39-55 and Col. 51, lines 31-45);

d) receiving one or more data objects format (para. [0033]) (The receiving a the java class to convert to a distributed object meets this limitation);

e) converting the received one or more data objects, via the transformation classes:

(1) from the first object type to the second object type (Col. 48, lines 23-28); or

(2) from the second object type to the first object type; and

f) transmitting the converted one or more data objects (Col. 48, lines 23-28).

16. Sandhu does not explicitly teach generating a plurality of transformation classes using the first and second object models and the transformation mapping rules, the one or more transformation classes being configured to transform the one or more data objects from the first object type to the second object type

17. Knight explicitly teaches generating transformation classes (“transformer object”) based on retrieved XSLT documents containing mapping rules that map from a first object type to a second object type (para. [0012], [0081], [0101] and Fig. 13).

18. It would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Sandhu with the teachings of Knight. One would have been motivated by the modularity offered by allowing for changes to be made in how messages are transformed without having to recompile and rebuild the entire software product being used (Knight: para. [0012]). This allows for the transformation

classes to be dynamically generated and utilized as necessary, thereby allowing one to make changes as to how the transformation from one object type to another is performed without requiring the entire application to be taken offline and recompiled.

19. As to **Claim 12**, this claim is rejected for the same reasoning as provided for **Claim 3**.

20. As to **Claims 13 and 14**, this claim is rejected for the same reasoning as provided for **Claim 4**.

21. As to **Claim 15**, Sandhu further teaches wherein the one or more data objects are received from a messaging middleware (Col. 36, lines 6-25).

22. As to **Claim 16**, Sandhu further teaches wherein the one or more data objects are received from an application, the application being coupled to a messaging middleware (Col. 36, lines 6-25).

23. As to **Claims 17-21**, being directed to the system with one or more processors, one or more memories, coupled to that processor, and a data transformation adapter implementing the method of **Claims 1-4 and 6**, these claims are rejected for the same reasoning as applied to **Claims 1-4 and 6**.

24. As to **Claim 22**, Sandhu teaches the invention substantially as claimed including a system for data object transformation, the system comprising:

- a) a communications line (Col. 36, lines 6-25);
- b) a transformation adapter coupled to the communications line, the

transformation adapter including:

- i) an assembly/disassembly layer configured to convert messages from a first communications format to a second communications format (Col. 36, lines 26-46 and Fig. 7, item 1090);

- ii) a transformation layer configured to convert data objects from a first object type to a second object type (Col. 36, lines 26-46 and Fig. 7, item 1070);
- and

- iii) a method invocation layer (Col. 36, lines 26-46 and Fig. 7, item 1070);

- c) mapping rules wherein the mapping rules including eXtensible Markup Language (XML) based syntax that uses rule specification guides to facilitate transforming the one or more data objects from the first object type to the second object type (Col. 49, lines 39-55 and Col. 51, lines 31-45); and

- d) an application coupled to the transformation adapter, wherein the application transmits data to and receives data from the method invocation layer (Col. 36, lines 6-25).

25. Sandhu does not explicitly teach wherein the transformation layer uses transformation classes or the use of a transformation class generator configured to generate the one or more transformation classes using transformation mapping rules.

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26. Knight explicitly teaches a generator for generating transformation classes (“transformer object”) based on retrieved XSLT documents containing mapping rules that map from a first object type to a second object type (para. [0012], [0081], [0101] and Fig. 13).

27. It would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Sandhu with the teachings of Knight. One would have been motivated by the modularity offered by allowing for changes to be made in how messages are transformed without having to recompile and rebuild the entire software product being used (Knight: para. [0012]). This allows for the transformation classes to be dynamically generated and utilized as necessary, thereby allowing one to make changes as to how the transformation from one object type to another is performed without requiring the entire application to be taken offline and recompiled.

28. **Claims 23-25**, these claims are rejected for the same reasoning as applied to **Claims 2-4**, respectively.

29. As to **Claim 26**, being directed to the apparatus comprising means for implementing the data transformation adapter of **Claim 11**, this claim is rejected for the same reasoning as applied to **Claim 11**.

Conclusion

30. Examiner has cited particular columns and line numbers and/or figures in the references as applied to the claims for the convenience of the applicant. Applicant is reminded that rejections are based on references as a whole and not just the cited passages. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant, in preparing the responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the cited art or disclosed by the examiner.

31. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

32. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Pantoliano, Jr. whose telephone number is (571)270-1049 and whose direct fax number is (571) 270-2049. The examiner can normally be reached on Monday-Thursday, 8am – 4pm EST. Please note that a request for an interview in regard to the present application should be accompanied by a written agenda (***including proposed amendments***, if available, and ***specific issues*** to be discussed) sent to the fax number cited above.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng An can be reached on (571)272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RP
03/26/2008

Richard Pantoliano, Jr.
Examiner
Art Unit 2194

/Li B. Zhen/
Primary Examiner, Art Unit 2194